

Amendments to the Drawings:

The attached sheet of drawings includes new Fig. 12. This sheet, which includes Fig. 12, is an addition to the Figures.

Attachment: Replacement Sheet

Remarks

Reconsideration of this application, as amended, is respectfully requested. Prior to entry of this amendment, claims 1-7 and 10-22 were pending, upon entry of this amendment, claims 1-7 and 10-22 will remain pending as only claim 3 has been amended. In addition, new Figure 12 has been added with corresponding changes in the specification.

In the Office Action mailed October 21, 2003, the Examiner set forth the following objections and rejections: (1) the drawings are objected to under 37 C.F.R. § 1.83(a) for failing to show a crimp affixing the tube to the stator poles, rotating the tube while press fitting the tube on the stator to facilitate alining the skewed interlocks with the skewed poles, and the skewed interlocks to match the stator poles; (2) the specification is objected to for spelling errors at page 1, line 10, with respect to recite in “aw” instead of “are”; claim 3 was objected to for misspelling “crimpt” instead of “crimped”; (3) claims 20-22 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter relating to the interlocks being skewed to match the stator poles which was not described in the specification; (4) claims 1-7 and 10-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S.P.N. 6,053,705 to Schob et al. (hereinafter “the Schob patent”), U.S.P.N. 5,266,859 to Stanley (hereinafter “the Stanley patent”), and U.S.P.N. 1,974,183 to Gunderson (hereinafter “the Gunderson patent”); and (5) claims 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Schob patent, the Stanley patent, U.S.P.N. 2,450,982 to O’Brien (hereinafter “the O’Brien patent”), and in further view of U.S.P.N. 2,730,636 to Dunn (hereinafter “the Dunn patent”).

With respect to the objections to the drawings, specification, and claim 3, the Applicant submits that the amendments enclosed herewith overcome these objections. In particular, new Figure 12 has been included to show the skewed stator poles as described in the original disclosure at page 6, line 23. The addition of Figure 12 does not add new matter as it was clearly described in the Specification at page 6, line 22, and is now only being added to show each claimed feature in the drawings - the original claims did not claim this feature.

In addition, the Applicant submits that the original disclosure at page 7, line 20 provides sufficient antecedent basis to demonstrate that the interlocks 38 extend within the stator gaps 40, and that if the stator gaps 40 are skewed the interlocks thereby must also be skewed in order to extend within the stator gaps 40. Necessarily, such skewing of the stator gaps would also require rotating the tube to accommodate the curved extensions of the interlocks traveling along the skewed stator gaps during insertion.

With respect to the rejections to claims 20-22 under 35 U.S.C. § 112, first paragraph, the Applicant submits that the specification and drawings together, as amended, provide a full, clear, concise, and exact description of the interlocks being skewed to match the skewed stator poles.

With respect to the rejections to claims 1-7 and 10-21 under 35 U.S.C. § 103(a) as being unpatentable over the Schob, Stanley and Gunderson patents, the Applicant submits that it is improper to combine these references and that even the improper combination of these references still fails to teach the claimed invention.

The combination of these references is improper. The Schob patent relates to a rotary pump and the use of a twisted propeller to pump fluid through a housing. In contrast, the Stanley patent relates to skewing a rotor and stator to minimize acoustic noise generation caused by ovalization of the stator during operation. On endeavoring to solve problems relating to pumping fluid would not logically avail themselves of the teachings provided in an acoustical noise reduction patent. Accordingly, absent improper hindsight derived from the Applicant's application, there is no motivation to combine the teachings provided by the fluid pumping of the Schob patent with acoustical noise reduction teachings provided by the Stanley patent.

In addition, the Gunderson patent actually teaches away from any combination with the Schob patent as the proposed combination would render the Schob patent inoperable for its intended purpose. More specifically, the Schob patent is intended to pump fluid along its rotor through a housing, but the Gunderson patent is intended to use an impeller to pump fluid around not only the rotor but also the stator. Thus, it is improper to combine the Schob patent with the Gunderson patent as doing so would change the principle operation of the Schob patent.

Now notwithstanding the improper combination of these references, the Applicant submits that even such an improper combination still fails to teach the claimed invention. In particular, the Examiner admits that the Schob patent fails to disclose a tube for directing fluid which also includes interlocks extending into stator gaps, as recited in independent claims 1, 17, and 19. The Examiner relies upon the Gunderson patent to make up for this deficiency of the Schob patent.

This reliance on the Gunderson patent is improper. The tube of the Gunderson patent is not used for directing fluid at all, let alone along a rotating rotor. In fact, the Gunderson patent particularly teaches that it is preferable to prevent any fluid from flowing through the tube as it is sealed to produce a water-tight joint. The Gunderson patent further notes that the tube may be filled with an insulated liquid or oil such that a pressure may be maintained within the tube to act as an additional safeguard against the entrance of water. As such, the tube disclosed by the Gunderson patent is not a tube which is used to direct fluid pumped therethrough by a rotor, and therefore, independent claims 1, 17, and 19, and claims 2-7, 10-16, 18, 20, and 21 which dependent therefrom and include all the limitations thereof, are patentable even over the improper combination of the Schob, Stanley, and Gunderson patents.

Further, with respect to dependent claims 4, 18, and 22, the Gunderson patent fails to disclose that the interlocks are skewed to match a skewed stator, and in particular with respect to dependent claim 22, that the tube is rotated during press fitting of the tube within the stator to accommodate the curved extension of the interlocks traveling along the stator gaps. In fact, the Gunderson patent only teaches that the interlocks are formed by a Rose's metal expanding upon solidification so that the metal fills a wedge-shaped portion within the coil slots of the stator.

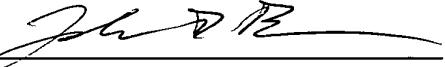
For the foregoing reasons, the Applicant submits that the rejection to claims 1-7 and 10-21 under 35 U.S.C. § 103(a) as being unpatentable over the Schob, Stanley, and Gunderson patents is improper. There is no motivation to combine these references and even the improper combination of these references fails to teach the claimed invention.

With respect to the rejections to claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over the Schob, Stanley, Dunn, and O'Brien patents, the Applicant points out that claims 20 and 21 depend from patentable independent claim 19 and include all limitations thereof, and therefore, is patentable for at least the same reasons that independent claim 19 is patentable. Moreover, the Applicant points out that the Examiner fails to make any reference to the Dunn patent in the rejection and that the reliance upon the O'Brien patent to teach the interlocks is also deficient. The O'Brien patent merely discloses that a number of flats are included on a member so that the member is readily insertable and yet fixedly held against rotation and easily removable. The flat portions do not extend within the stator gaps, and thus these flat portions cannot be relied upon to teach the claimed interlocks which extend into the stator gaps.

For the foregoing reasons, reconsideration of the objections and rejections of the application, as amended, is respectfully requested. The Examiner is respectfully requested to pass this case to issue, and is invited to call the undersigned if it would further advance prosecution of this case to issue.

Respectfully submitted,

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